

ABSTRACT

A distributed generation system is disclosed that is capable of conditioning power from a utility grid, providing backup power in the event the utility grid fails, and exporting excess power to the utility grid. The system comprises an engine coupled to an asynchronous generator, an energy storage device, an engine controller capable of managing the engine and controlling its torque or speed or power, and an inverter for generating an AC output and also capable of controlling the frequency and voltage of the generator to match the frequency of a coupled utility grid.